Remarks/Arguments

Notice of Non-Compliant Amendment

The Examiner cited Claim 11 as having an improper identifier. Applicants had inadvertently failed to remove two words in Claim 11 that had been deleted in the preliminary amendment dated January 12, 2006. Applicants have removed the two words from Claim 11; therefore, the identifier "previously presented" is now appropriate for Claim 11.

Claim Amendments

No new matter has been added. For example, Figures 2-22 clearly show that a computer-based method is implemented.

The Rejection of Claims 1-14 under 35 U.S.C. §101

The Examiner rejected Claims 1-14 under 35 U.S.C. §101, as failing to fall within one of the four statutory categories of invention. The Examiner based the rejection substantially on *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008), which incorporated the Supreme Court precedent cited by the Examiner.

In re Bilski upheld the U.S. Supreme Court ruling that a claimed process is patent-eligible under § 101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing. For example, the court stated:

"The machine-or-transformation test is a two-branched inquiry; an applicant may show that a process claim satisfies § 101 either by showing that his *claim is tied to a particular machine*, or by showing that his claim transforms an article. See Benson, 409 U.S. at 70. Certain considerations are applicable to analysis under either branch. First, as illustrated by Benson and discussed below, the use of a specific machine or transformation of an article must impose meaningful limits on the claim's scope to impart patent-eligibility. See Benson, 409 U.S. at 71-72. Second, the involvement of the machine or transformation in the claimed process must not merely be insignificant extra-solution activity. See Flook, 437 U.S. at 590.

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As to machine implementation, Applicants themselves admit that the language of claim 1 does not limit any process step to any specific machine or apparatus. See Appellants' Br. at 11. *As a result, issues specific to the machine implementation part of the test are not before us today. We leave to future cases the elaboration of the precise contours of machine implementation, as well as the answers to particular question, such as whether or when recitation of a computer suffices to tie a process claim to a particular machine.*" 545 F.3d at 962. (emphasis added).

Particular machine or apparatus

In re Bilski did not provide guidance as to how the first of the above tests is to be evaluated. Thus, we can glean that tying a claim to a particular machine is a broad finding in *In re Bilski*; however, *In re Bilski* does not provide any further guideline in determining this tie.

Claims 1-14 are drawn to a specially-programmed computer. In light of an absence of further guidance in *In re Bilski*, Applicants submit that the specially-programmed computer recited in the claims satisfies the requirements for a "particular machine," for example, only the computer recited in the claims includes the programming needed to execute the process recited in the claims – any other computer, not so programmed, will be useless with respect to executing the claim limitations.

Transformation

Claim 1 recites: "(d) automatically adjusting, using the specially programmed computer, the optimal intensity of the light intensity by accepting a selection of a first specific number of defects to approach on a first wafer and taking respective pictures of the first specific number of defects on the first wafer and if necessary regulating to the optimal illumination using the respective pictures; (e) checking, using the specially programmed computer, a detection using a few examples, whereby an optimization of the detection parameters is carried out by accepting a selection of a second specific number of defects to approach on a second wafer, taking pictures of the second specific number of defects on the second wafer, displaying the pictures, and using the pictures to adjust a detection threshold; (f) automatically approaching all defects of a wafer or wafers, whereby the respective defect is detected and a descriptor is assigned, by the specially

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programmed computer, to the respective defect; and, (g) analyzing and automatically grouping, using the specially programmed computer, the descriptors of the defect."

Regarding the transformation test, *In re Bilski* stated:

"In contrast, we held one of Abele's dependent claims to be drawn to patent-eligible subject matter where it specified that "said data is X-ray attenuation data produced in a two dimensional field by a computed tomography scanner." Abele, 684 F.2d at 908-09. This data clearly represented physical and tangible objects, namely the structure of bones, organs, and other body tissues. Thus, the transformation of that raw data into a particular visual depiction of a physical object on a display was sufficient to render that more narrowly-claimed process patent-eligible.

We further note for clarity that the electronic transformation of the data itself into a visual depiction in Abele was sufficient; the claim was not required to involve any transformation of the underlying physical object that the data represented. We believe this is faithful to the concern the Supreme Court articulated as the basis for the machine-or-transformation test, namely the prevention of pre-emption of fundamental principles. So long as the claimed process is limited to a practical application of a fundamental principle to transform specific data, and the claim is limited to a visual depiction that represents specific physical objects or substances, there is no danger that the scope of the claim would wholly pre-empt all uses of the principle." (United States Court of Appeals for the Federal Circuit 2007-1130 (Serial No. 08/833,892) IN RE BERNARD L. BILSKI and RAND A. WARSAW, page 26)

Claim 1 clearly satisfies the above requirements. Light is adjusted and photos are taken of defects, that is, data is gathered representing physical and tangible objects; another round of photos (again representing physical and tangible objects) is taken to manipulate parameters and optimize the process; and then defects are detected, data representing the defect (that is, data representing physical and tangible objects) is categorized and grouped, and descriptors, representing physical and tangible objects are analyzed and grouped.

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Thus, Claim 1 clearly recites operations involving data representing physical and tangible objects, for example, defects in a wafer.

Applicants courteously requests that the rejection be removed.

<u>The Rejection of Claims 1-3 and 10-14 under 35 U.S.C. §103(a)</u>

The Examiner rejected Claims 1-3 and 10-14 under 35 U.S.C. §103(a) as being unpatentable over United States Patent No. 6,408,219 (Lamey et al.) in view of United States Patent No. 6,973,209 (Tanaka).

Applicants respectfully traverse the rejection.

Claim 1

<u>Lamey does not accept user selections and inputs</u>

Amended Claim 1 recites: "(a) accepting, using a specially programmed computer, a user selection of a review data file; (b) accepting, using the specially programmed computer, parameters and data input by a user on one page of a learning mode whereby the parameters and the data are known to the user;"

The Examiner cited column 2, lines 11-13; 24-39, column 10, lines 36-60; and column 11, lines 38- 49 of Lamey as teaching the previous Claim 1 limitation of selecting a review data file. These citations do not teach accepting a user selection of a review data file.

The Examiner cited column 5, lines 39-45 of Lamey as teaching the previous Claim 1 limitation of inputting parameters and data by a user on one page of a learning mode. These citations do not teach accepting parameters and data input by a user on one page of a learning mode.

<u>Lamey does not teach the alignment of Claim 1</u>

Amended Claim 1 recites: "(c) starting, using the specially programmed computer, an alignment procedure and a procedure for adjusting light intensity, the alignment procedure with respect to at least one physical location on a wafer;"

The Examiner cited col. 5, lines 7-28 of Lamey as teaching an alignment process. However, Claim 1 recites a physical alignment process, for example, alignment is with respect to a physical location on a wafer. In contrast, Lamey teaches aligning <u>data</u>, not a process with

respect to a physical location. Further, the data adjust taught by Lamey does not even address light intensity.

Lamey does not teach the adjustment of Claim 1

Amended Claim 1 recites: "(d) automatically adjusting, using the specially programmed computer, the optimal intensity of the light intensity by accepting a selection of a first specific number of defects to approach on a first wafer and taking respective pictures of the first specific number of defects on the first wafer and if necessary regulating to the optimal illumination using the respective pictures;"

The Examiner cited col. 6, lines 38-44 of Lamey as teaching: "(d) automatically adjusting the optimal intensity of the lighting by approaching a few defects and if necessary regulating to the optimal illumination" However, this paragraph only has a general teaching of optimizing classification of defects and does not disclose any detail or specifics. In contrast, Claim 1 recites a specific process involving a specific number of defects, photos, and regulating illumination, none of which are taught, suggested, or motivated by Lamey.

Tanaka does not teach the checking of Claim 1

Amended Claim 1 recites: "(e) checking, using the specially programmed computer, a detection using a few examples, whereby an optimization of the detection parameters is carried out by accepting a selection of a second specific number of defects to approach on a second wafer, taking pictures of the second specific number of defects on the second wafer, displaying the pictures, and using the pictures to adjust a detection threshold;"

The Examiner cited col. 8, lines 10-21 of Tanaka as teaching: "(e) checking a detection using a few examples, whereby the optimization of the detection parameters is carried out using pictures" Tanaka discloses detecting defects, not an optimization process. However, Applicants have amended Claim 1 to add further detail regarding an optimization process. For example, Claim 1 now recites limitations regarding a second specific number of defects to approach on a second wafer, taking pictures of the second specific number of defects on the second wafer, displaying the pictures, and using the pictures to adjust a detection threshold. Tanaka does not teach these added limitations.

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For all the reasons noted above, the cited references fail to teach all the elements of Claim 1. Nor do the cited references suggest or motivate the elements not taught by the cited references. Therefore, Claim 1 is patentable over the cited references. Claims 2, 3, and 10-14, dependent from Claim 1, also are patentable over the cited references.

Applicants courteously request that the rejection be removed.

The Objection of Claims 4-10 as Being Dependent Upon a Rejected Base Claim

Claims 4-10 were objected to as being dependent upon a rejected base claim, but the Examiner indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 10 was included in the above obviousness rejection; therefore, Applicants assume that the Examiner intended to object to Claims 4-9. In any case, Applicants have shown *supra* that Claim 1 is allowable; therefore Claims 4-9 do not depend from a rejected base claim. Applicants respectfully submit that these new claims are now in condition for allowance.

Applicants courteously request that the objection be removed.

Conclusion

Applicants respectfully submit that the present application is now in condition for allowance, which action is courteously requested. The Examiner is invited and encouraged to contact the undersigned attorney of record if such contact will facilitate an efficient examination and allowance of the application.

Respectfully yours,

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